USER'S LOGISTICS SUPPORT SUMMARY

MARINE CORPS COMMON HARDWARE SUITE
UNIX HARDWARE

NSN 7010-01-469-0111, 7025-01-470-0923, 7010-01-468-8857,
7025-01-470-0927, 7022-01-477-9133, 7035-01-468-9961,
7025-01-470-0916, 7035-01-468-9965, 7035-01-469-0106,
7035-01-469-0109, 7035-01-469-0108

MARINE CORPS SYSTEMS COMMAND
QUANTICO, VA 22134-5010

JULY 2001
PCN 132 106740 00

DEPARTMENT OF THE NAVY
Headquarters, U.S. Marine Corps
Washington, DC 20380-0001

31 July 2001

1. This User's Logistic Support Summary (ULSS), authenticated for Marine Corps use and effective upon receipt, advises the Fleet Marine Force and other selected commands of the plan to field and logistically support Marine Corps Common Hardware Suite computers.

2. Submit notice of discrepancies or suggested changes to this ULSS to: Commander, MARCORSYSCOM, Attn: Program Manager C4INMCI/IT, 2033 Barnett Ave, Suite 315, Quantico, Virginia 22134-5010. In addition, forward an information copy to Program Support (PSL) at the same address.

3. This ULSS supersedes LAPs 19-97 Revision 2, 23-95 Revision 2, 23-97 Revision 1, 21-97 Revision 1, 24-97 Revision 1, 15-95 Revision 2, 15-92 Revision 1, 22-97 Revision 2, 17-95 Revision 2, 16-95 Revision 1, and 02-00.

4. This ULSS is applicable to the Marine Corps Reserve.

BY DIRECTION OF THE COMMANDER, MARINE CORPS SYSTEMS COMMAND

OFFICIAL:

D. J. WALSH
Program Manager, Navy Marine Corps Intranet/Information Technology Infrastructure
Marine Corps Systems Command

DISTRIBUTION: PCN 132 106740 00

USER'S LOGISTICS SUPPORT SUMMARY
FOR THE
MARINE CORPS COMMON HARDWARE SUITE
UNIX HARDWARE
(SUN MICROSYSTEMS AND HEWLETT-PACKARD COMPANY)

1. Introduction. The Marine Corps Common Hardware Suite (MCHS) is one element of the Marine Corps enterprise architecture solution for information technology (IT). MCHS hardware is purchased by the Program Manager (PM) Navy Marine Corps Internet (NMCI)/ IT, Marine Corps Systems Command (MARCORSYSCOM). This User's Logistics Support Summary (ULSS) does not address support of computers furnished under the NMCI program.

a. Source of Requirement. The MCHS mission need is documented in the Operational Requirements Document for the Marine Corps Global Command and Control System, Number CCC 31.1, dated 9 October 1998.

b. Points of Contact (POC)

TITLE	COMMAND ADDRESS	TELEPHONE
PM NMCI/IT	COMMANDER MARCORSYSCOM CODE C4INMCI/IT 2033 BARNETT AVENUE SUITE 315 QUANTICO VA 22134-5010	(703) 784-0740 DSN: 278-0740
PROJECT OFFICER MCHS UNIX HARDWARE, NMCI/IT	COMMANDER MARCORSYSCOM CODE C4INMCI/IT 2033 BARNETT AVENUE SUITE 315 QUANTICO VA 22134-5010	(703) 784-0819 DSN: 278-0819
ASSISTANT PROGRAM MANAGER FOR LOGISTICS (APML) NMCI/IT	COMMANDER MARCORSYSCOM CODE C4INMCI/IT 2033 BARNETT AVENUE SUITE 315 QUANTICO VA 22134-5010	(703) 784-0826 DSN: 278-0826

TITLE	COMMAND ADDRESS	TELEPHONE
MCHS INTEGRATED LOGISTICS SUPPORT OFFICER, NMCI/IT	COMMANDER MARCORSYSCOM CODE C4INMCI/IT 2033 BARNETT AVENUE SUITE 315 QUANTICO VA 22134-5010	(703) 784-0815 DSN: 278-0815
MCHS LOGISTICS MANAGEMENT SPECIALIST (LMS)	LIFE CYCLE MANAGEMENT CENTER ATTN CODE 843-3 814 RADFORD BOULEVARD ALBANY GA 31704-0320	(229) 639-6285 DSN: 567-6285 FAX: 567-5498
	Email: mbmatcom843-3mchs@matcom.usmc.mil	
REPLACEMENT PARTS HOTLINE	**REFER TO THE SUPPORT LABEL ON EACH CENTRAL PROCESSING UNIT (CPU) AND MONITOR**	

INFORMATION REGARDING MCHS MAY BE FOUND AT THE FOLLOWING URL:

http://mchs.marcorsyscom.usmc.mil

c. System Description. The MCHS architecture was established to provide commercial-grade (including certain rugged versions), non-developmental common computer hardware to acquisition program managers, functional program managers, the Operating Forces, and the supporting establishment. The MCHS includes both UNIX computers and Intel® processor-based computers for applications ranging from file/application servers to mobile computing assets. Only Sun Microsystems (Sun) and Hewlett-Packard (HP)) UNIX computers are covered under this ULSS.

d. Operational Characteristics. All UNIX computers addressed herein are commercial-grade products. The hardware, although designed for a benign office environment, has been found cost effective for use in field operations. Some configurations are rack-mounted for additional protection. Given normal care and protection that is reasonable for an electronic device, this hardware will provide reliable and high quality performance under most conditions. The MCHS UNIX product list encompasses the following classes of computer hardware: workstations and servers. Within the workstation class there are three levels of performance: General Purpose (GP), Technical, and Special Purpose (SP). Within the server class there are three levels of performance: Departmental, Enterprise, and Entry Level. The plan is to replace UNIX hardware on a three-year cycle.

e. Replaced Weapon Systems and Equipment. UNIX hardware is fielded on a program-specific basis. MARCORSYSCOM PM offices fielding UNIX hardware must address the disposition of replaced hardware in program documentation.

2. Administrative Information

a. Nomenclature

(1) Workstations – Technical, GP, and SP

(2) Servers – Enterprise, Departmental, and Entry Level

b. Table of Authorized Material Control Numbers (TAMCN)

(1) Workstations

	Sun	HP
• Technical:	A0931	A0899
• GP:	A0928	A0895
• SP:	A0934	(None)

(2) Servers

• Enterprise:	A0930	A0929
• Departmental:	A0897	A0816
• Entry Level:	A0926	A0893

c. Stores Account Code. Stores account code-3, in all cases.

d. National Stock Number (NSN)

(1) Workstations

• Technical:	7010-01-469-0111	7025-01-470-0923
• GP:	7010-01-468-8857	7025-01-470-0927
• SP:	7022-01-477-9133	(None)

(2) Servers

• Enterprise:	7035-01-468-9961	7025-01-470-0916
• Departmental:	7035-01-468-9965	7035-01-469-0106
• Entry Level:	7035-01-469-0108	7035-01-469-0109

e. Item Designator (ID) Number

(1) Workstations

	Sun	HP
• Technical:	10674A	10685A
• GP:	10675A	10684A
• SP:	10731A	(None)

(2) Servers

• Enterprise:	10679A	10683A
• Departmental:	10676A	10678A
• Entry Level:	10677A	10680A

f. Unit of Issue. The unit of issue is each, in all cases.

g. Unit Cost. The unit cost is the current market value, in all cases.

h. Support Costs. Maintenance support costs are covered by a centrally funded supply support (i.e., parts only) agreement unless the system is damaged from abuse or neglect. Keep-alive batteries are long life and relatively inexpensive. Requirements for consumables (i.e., recordable media, floppy disks and re-writable compact disks) are wholly dependent upon local tempo of operations. Therefore, annual support costs per system per year are minimal and not readily estimated except by the unit personnel.

i. Physical Characteristics

(1) The operational and storage shipping configurations are as follows:

	Operational Configuration	Storage and Shipping Configuration
Length: Width: Height: Square: Cube: Weight: Stowage:	The computer system setup in the operational environment is user variable.	The computer systems may be packaged in various ways, ranging from original shipping boxes to unit provided rugged commercial containers to custom-built embarkation boxes

(2) Specific configurations vary by program. Therefore, the fielding MARCORSYSCOM PM office must disseminate hardware configuration(s) in the program's ULSS.

j. Petroleum, Oil, and Lubricants. N/A.

k. Equipment Density. Normal density.

l. Resource Reporting. N/A.

m. Power Requirements. Each computer has an internal keep-alive battery that is a sealed lithium carbon monoflouride button cell. In all cases, external alternating current electrical power is sourced from commercial grade, single phase, 60 cycle, pooled resources (computers operated on utility grade electrical power sources should have a locally procured surge protector installed immediately prior to the computer system):

(1) Workstations: 500 watts nominal.

(2) Servers: 800 watts nominal.

n. Associated Weapon Systems and Equipment. N/A.

3. Fielding Methodology

a. General Fielding Plan. PM NMCI/IT does not field UNIX hardware. PM NMCI/IT functions as the purchasing agent for UNIX hardware required by other MARCORSYSCOM PM offices. Those PM offices are responsible for publishing fielding plans. Fielding plans must reference this document as a source of information for logistics support of UNIX computers. Those PM offices are also responsible for furnishing a planned distribution of assets to PM NMCI/IT. The distribution plan will be used to create unit allowances in the Logistics Management Information System (LMIS). For those programs with a system TAMCN, the MCHS TAMCN will have an alpha-suffix with a distribution that mirrors the system TAMCN distribution. Appendix A of this document does not reflect planned allowances; however, current information about relevant TAMCN allowances may be found by following instructions at the following Internet Web address:

http://www.mccdc.usmc.mil/tfs/submit_info.htm

Out-of-box failures will be reported via established maintenance procedures. Non-receipt of all components of a system or receipt of an incorrect configuration will be reported to the fielding program or project POC for resolution.

b. Method of Fielding. Fielding methodology is program dependent. In some cases the hardware will be direct shipped from the source of supply to the receiving units. In other cases the initial hardware shipment will be to an integrator (to load software) and then sent to the receiving unit or perhaps to a central location in the field for new equipment training and then turned over to the receiving unit. MARCORSYSCOM PM offices fielding UNIX hardware must disseminate the fielding methodology that will be used for their program.

c. Fielding Responsibilities. A MARCORSYSCOM PM office fielding UNIX hardware must publish fielding responsibilities peculiar to their program. Advance coordination must be performed if the fielding PM office determines that assistance is required from PM NMCI/IT.

4. Logistics Support

a. Maintenance Support. The planned life cycle for UNIX hardware is three years. The equipment will be purchased with a three-year supply support (i.e., parts only) agreement. If the hardware is kept in-service beyond the planned life cycle, an extended agreement, centrally funded by the Commander, MARCORSYSCOM, will be established for the remaining life cycle. The PM NMCI/IT, prior to the end of the initial three-year period, will provide details of the extended support process for the remaining life cycle.

(1) Maintenance Concept. The MCHS maintenance concept was developed using standard Marine Corps levels of maintenance. Support is provided by using a mix of organic and commercial services. During the period of the commercial supply support agreement, certified Government computer maintainers, using replacement parts furnished by the service provider, must repair any part of the system that becomes defective through normal operation. Replacement parts will be provided at no additional cost to the Government. A label on the major component(s) of the system will identify the source of commercial supply support. Refer to Part II of Appendix B for available enhancements to the basic logistics support. Fielding PM offices must provide relevant information on any enhancements that are ordered at the time of hardware purchase. Repair charges for items damaged due to misuse or abuse will be borne by the using unit (refer to subparagraph (b) following).

Line replaceable units (LRU) are identified as system components (i.e., CPU, monitor, keyboard, mouse, accessories, hard disk drives (HDD)* and cables).

Shop replaceable units (SRU) are identified as internal circuit cards and modules that do not require soldering operations to remove. By definition, SRUs are limited to internal components of the CPU and the monitor.

Each CPU and monitor has a label that reflects supply support agreement-related information. Refer to Appendix B, Part I, paragraph 5.0, for specific data elements on the label.

(a) Organizational Level Maintenance. The operator performs care and cleaning tasks and troubleshoots the system to the LRU. Equipment record jackets should be established in accordance with current instructions. The record jacket should identify all options that were included with the system at the time of initial issue. An inoperative LRU, or the entire system if the defective LRU cannot be isolated, is inducted into the supporting second echelon shop. Second echelon maintenance on MCHS hardware is performed by military occupational specialties (MOS) 2821, 2818, 6494, and 4066 (or the equivalent 0651 when established). The following second echelon maintenance tasks apply:

- Verify or isolate to the faulty LRU.
- Evacuate the inoperative LRU to the supporting maintenance facility.

*There is an enhancement on the contract for support of a failed HDD with classified information. If this enhancement is purchased, the fielding PM must provide execution details in the program ULSS. If the enhancement is not purchased, the fielding program must provide a support alternative, or the using unit must fund local replacement of the failed HDD.

(b) Intermediate Level Maintenance. The basic supply support agreement for UNIX hardware is for replacement parts only. The Marine Corps must provide the labor to repair the equipment. Replacement parts are provided at no additional cost. The contract vehicle has options to upgrade the level of support services (e.g., it is possible to purchase an optional parts and labor service support service). The label on the hardware indicates the level of support purchased. If the label becomes illegible or missing, contact the MCHS LMS or the appropriate original equipment manufacturer (OEM) to determine specific support services originally purchased.

At this level of maintenance, the qualified computer maintainer verifies the status of LRUs, repairs CPUs and monitors by removal and replacement of SRUs, and initiates maintenance agreement claims. Submission of a Recoverable Item Report, document identifier code WIR, is not required when initiating a claim for replacement parts. Maintenance at this level is performed by MOSs 2818, 2821, 4066 (or the equivalent 0651 when established), and 6494. Repair of LRUs by removal and replacement of SRUs is authorized only for qualified personnel. Qualified personnel are those individuals who have successfully completed the OEM's qualification criteria. Authorized maintenance sites will not be designated due to the relatively low quantity of in-service UNIX hardware and the practice of on-site repair. Typical repair actions at this level include:

- Verify inoperative LRU.
- Troubleshoot the LRU (CPU or monitor only) to a defective SRU.
- Initiate a supply support claim action.

The service provider will validate the diagnosis and advance ship a replacement part within 24 hours, excluding weekends and national holidays (unless this response time was upgraded at the time of hardware purchase, refer to the label on major system components).

CAUTION

Authority to access internal components (SRUs) is subject to availability of an electrostatic discharge (ESD) safe workstation. Failure to properly use ESD safe procedures may result in immediate or delayed catastrophic piece-part failure and/or degraded LRU performance detectable only during special or peak equipment performance.

NOTE

Items damaged by misuse or abuse may be returned to service by repair as required at the intermediate level. Such repair would be locally funded. However, supply support eligibility may be forfeited depending on the extent of repair required, quality of the repair work performed, or if repair parts are other than those approved by the supply support service provider. The service provider may be contacted via the hotline telephone number reflected on the hardware label. Repair parts may be purchased from any available source and must be locally funded.

Refer to Appendix C for "issue" reporting procedures. An issue is defined as a breach of the contract service provisions. For example, on-call labor support is purchased and the contract

requires the service provider to have a field service technician at the Government site no later than the next business day after receipt of a repair claim (national holidays and weekends excluded). If the technician does not arrive within the specified time and the Government customer has not approved a delay, a breach of the contract service provisions has occurred. The service provisions are contained in Appendix B hereto.

Refer to Appendix D for repair disagreement reporting procedures. A repair disagreement could occur if a Government customer returns an inoperative item and the service provider subsequently notifies the customer that the returned item is inoperative for reasons other than normal use (e.g., misuse or abuse). If the customer does not concur, then the process defined in the referenced appendix is to be followed.

(2) Designated Support Depots. N/A.

(3) Calibration Requirements. N/A.

b. Contractor Support Requirements. N/A.

c. Manpower, Personnel, and Training. The MARCORSYSCOM PM office that is fielding UNIX hardware shall address personnel and training requirements in appropriate program documentation. Specifically, the MARCORSYSCOM PM office fielding the hardware must perform an analysis to ensure the availability of qualified computer maintainers to support their program. The PM NMCI/IT office will fund for training and certification of those technicians to perform self-maintenance. Contact the APML NMCI/IT for assistance.

d. Supply Support

(1) Initial Supply Support. The PM NMCI/IT will not centrally purchase or catalog spares. A spares package is available for lease (one, two, or three years) at the time of the original hardware purchase. The fielding MARCORSYSCOM PM office is responsible for deciding on the applicability and quantity of spares packages for their program. Further, the fielding PM office is responsible for providing guidance on the how to account for the spares package(s). The contents of the spares package will be replaced without additional charge. The service provider must advance ship (via the most expeditious means of transportation available) replacement parts within 24 hours of receipt of a claim.

(2) Follow-On Supply Support. Paragraph 4a(1)(b) authorizes items damaged by misuse or abuse to be repaired at intermediate level maintenance during the contract support period. System components and repair parts used for non-contractor supported repairs during the contract period must be service provider-approved. Approval may be obtained by calling the applicable service provider's hotline. This process ensures that equipment parts replacement agreement remains in effect and that equipment remains reliable and performs properly. Repair parts to effect such repairs must be sourced and funded locally.

Additionally, a spares package is available for lease (one, two, or three years) at any time during the hardware life cycle. The spare package may be purchased by the PM office that fields the system or by the owning unit.

(3) Replacement Parts. The service provider is responsible for shipping replacement parts to the Government. The service provider will require a ship-to address that includes a building number (or street address), a commercial telephone number, and a POC. A fleet post office (FPO) address is not acceptable. The service provider will include an address form for returning the defective part and is responsible for return shipping costs. Defective parts not received by the service provider within 45 days of shipment of replacement parts will be billed to the end user at the then current price.

e. Support Equipment

(1) Special Tools. N/A.

(2) Common Tools. The following item, in-use and available in sufficient quantities, is required at organizational and intermediate levels of maintenance: Tool Kit, Electronic Equipment, TAMCN A7900.

(3) Special Purpose Test Equipment. N/A.

(4) General Purpose Test Equipment. The following item, in-use and available in sufficient quantities, is required at organizational and intermediate levels of maintenance: Multimeter, TAMCN H7030. The following item, in-use and available in sufficient quantities, is required at the intermediate level of maintenance: Workstation Kit, ESD Control, TAMCN H7299, or equivalent.

(5) Application Program Sets and Test Program Sets. N/A.

(6) Other Support Equipment. Two levels of software diagnostics are provided on each system. The first is a power on self-test feature. For Sun hardware, the second level is Sun's Validation Test Suite (VTS). VTS features both non-interactive and interactive tests, and is capable of running in the background of normal system operations while seamlessly sharing data with other applications and tools. HP has agreed to provide a similar capability.

f. Technical Publications. Each computer system will be delivered with a complete set of commercial documentation. Specific content varies with each vendor. These documents will not be cataloged into the publications control system. Spare publications will not be purchased for stockage. Such publications are routinely available for downloading, including updates, from the vendor's web site. It is strongly recommended that each receiving unit provide one or more set(s) of publications to their information technology support personnel. Military style technical manuals will not be produced.

g. Computer Resources Support. N/A.

h. Facilities. MARCORSYSCOM PM offices fielding UNIX hardware must address facilities impact, as appropriate, per their specific program needs.

i. Packaging, Handling, Storage and Transportation

(1) Packaging. Inoperative hardware evacuated to the supporting maintenance facility must be packaged to provide protection from damage in-transit. Repaired equipment being returned from the commercial maintenance support service provider for immediate use shall be packaged in accordance with best commercial practices. Packaging of lithium batteries will be in accordance with Technical Bulletin (TB) 43-0134, Battery Disposition and Disposal. Electronic equipment susceptible to damage from ESD, e.g., printed circuit cards, will be stored and shipped in electrostatic free protective wrapping. The Marine Corps Supply Instruction, SI-4400-15/5, and Technical Instruction, TI-4400-15/1A, provide instruction on the packaging, handling, storage and transportation of ESD sensitive devices.

(2) Handling. There are no special handling procedures for UNIX hardware.

(3) Storage. Equipment must be stored indoors, in an environment adequate to protect electronic equipment from adverse weather and pilferage. There is no reasonable expectation of a requirement for long-term storage of UNIX hardware.

(4) Transportation. Individual components of the systems are man portable. There are no restrictions on methods of transportation and no special in-transit security requirements. If a computer system is used to host classified application specific software or to process classified data, follow local standing operating procedures for security of classified material for in-transit safeguards. When suitably packaged, the MCHS equipment is transportable worldwide by highway, rail, air, marine and amphibious shipping and landing craft.

j. Transportability and Naval Integration. There are no special requirements for how the equipment is deployed using strategic or tactical lift. Precautions in handling and proper packaging, appropriate for fragile electronics equipment, are relevant for computers. There are no special naval integration issues associated with MCHS hardware.

k. Warranty The hardware covered by this ULSS is supported by a supply support agreement with a contractor identified on a label on the major components of the system, see Appendix B.

l. Environmental Safety and Health. System safety and health hazards have all been eliminated or reduced to a low risk level and there is no significant impact upon the environment. Each system is UL® approved and complies with applicable Federal Communications Commission rules. Disposal of keep-alive batteries must be accomplished in accordance with the current instructions in TB 43-0134, Battery Disposition and Disposal, consistent with federal, state, and local or host nation regulations.

m. Plan of Action and Milestones. N/A.

5. Actions Required to Place Equipment In-Service

a. Gaining Commands. Comply with major command guidance for placing new equipment in-service.

(1) Acceptance Inspection. At a minimum, an inventory should be conducted to verify that all components of each system have been received. An equipment record jacket should be established and maintained in accordance with current instructions. Out-of-box failures should be reported to the command POC and repaired per the procedures in paragraph 4 preceding. The command POC should note the issue and if the number of issues so warrant, the POC should notify the MCHS UNIX Hardware Project Officer for assistance in quickly resolving the issues. Inventory discrepancies should be reported to the command POC immediately upon discovery. The command POC may initiate contact with the vendor or contact the MCHS UNIX Hardware Project Officer for assistance in resolving the matter.

(2) Reporting Issue of Equipment. The gaining unit must report the issue of hardware in accordance with the instructions provided by the fielding MARCORSYSCOM PM office.

(3) Notification. There is no requirement to notify the Commander, MARCORSYSCOM or the Commander, Materiel Command (MATCOM) when placing UNIX hardware in-service.

(4) Obtaining Additional Equipment. N/A.

(5) Accounting for New Assets. Accounting for new assets will be performed in accordance with the requirements of Marine Corps Order (MCO) P4400.150D and MCO P4400.82F. Gaining commands in the supporting establishment should load these assets to their organic property accounting records.

(6) Post-Fielding Evaluation Reporting. Post-fielding evaluation reports shall be submitted in accordance with the requirements of MCO 4105.4 and Technical Manual (TM) 4420-15/1. The Gaining Unit Fielding Evaluation Report is available on-line at:

http://www.marcorsyscom.usmc.mil/fielding.nsf

(7) Materiel Defects Reporting. Quality and material deficiencies will be reported using the procedures identified in MCO 4855.10B. Reports are required only in the cases where deficiencies are beyond normal wear and tear (e.g., a system component spontaneously catches on fire). Particular attention must be given to requesting and following the disposal instructions for the defective equipment. Shipping and packaging discrepancies, for the initial shipment from the manufacturer, shall be reported in accordance with Secretary of the Navy Instruction (SECNAVINST) 4355.18, Reporting of Item and Packaging Discrepancies.

(8) Retrograde of Existing Equipment. If applicable, the MARCORSYSCOM PM office fielding the new UNIX hardware will furnish instructions for retrograde of replaced assets.

(9) Obtaining Supporting Consumables. Recordable media, floppy disks and compact disks, if required, must be purchased by the using unit and are available in the supply system.

(10) Security Requirements. The equipment is subject to pilferage; therefore, physical protection should be provided accordingly.

(11) Controlled Item Reporting. MCHS equipment with "A" TAMCNs is assigned allowance control code "A" and requires reporting in accordance with MCO P4400.82, Controlled Item Management Manual.

(12) Marine Corps Ground Equipment Resource Reporting. N/A.

(13) Table of Equipment (T/E) Deficiencies. Unit requisitions will not be submitted to fill T/E deficiencies. Assets force-fed by the fielding MARCORSYSCOM PM will fill allowance requirements. System components that become unserviceable will be repaired or replaced via the maintenance process. System components that become inoperative due to misuse or abuse will be repaired at the intermediate level maintenance at the owning unit's expense. For assets that are lost or stolen, contact the MCHS LMS (see paragraph 1b for the address) for guidance and assistance.

b. COMMARCORLOGBASES, Albany. The following unique responsibilities apply.

(1) Data Collection. Collect data on vendor support issues and repair disagreements forwarded by field units. Appendices C and D apply. Provide data, as requested, to the PM NMCI/IT.

(2) MCHS NSNs. Take action to assign an appropriate acquisition advice code to MCHS NSNs to indicate that the items are not available for requisition via the supply system.

(3) T/E Deficiencies. Reject unit supply requisitions for MCHS hardware. Validate using unit T/E deficiencies. Forward valid hardware shortages to the PM NMCI/IT for resolution.

(4) Disposition Instructions. Replaced computer hardware will be redistributed or disposed of in accordance with current instructions or as directed by the fielding PM.

c. MARCORSYSCOM

(1) PM NMCI/IT

(a) Authorized Maintainers. Plan, program, and budget funding for testing and certification of maintenance personnel for the support of UNIX hardware covered by this ULSS.

(b) Technical and Logistics Assistance. When requested by fielding MARCORSYSCOM PM offices or command POCs, the PM NMCI/IT will provide assistance in timely and effective resolution of other than isolated cases of out-of-box hardware failures and receipt of incomplete computer systems.

(c) Life Cycle Management. Maintain life cycle management of the hardware system per MCO 4105.4 and TM 4420-15/1, as required.

(d) T/E Deficiencies. Take action, within funding constraints, to fill valid unit T/E deficiencies that are forwarded by COMMARCORLOGBASES, Albany. Provide feedback to that command regarding the planned action.

(2) PM Offices Fielding UNIX Hardware

(a) Replaced UNIX Hardware. Provide disposition instructions in appropriate program documentation. Refer to paragraph 1e.

(b) System Configuration. Provide the specific UNIX hardware system configuration purchased to host application specific software in appropriate program documentation.

(c) Fielding Plan. Publish a program unique fielding plan. Include reference to this document therein. Include fielding methodology and responsibilities. Refer to paragraph 3.

(d) Planned Distribution. Provide a planned distribution of UNIX hardware to the PM NMCI/IT at the earliest possible time. This planned distribution will be used to link the fielding program to the TAMCN(s) being fielded. Refer to paragraph 3.

(e) Personnel and Training. Address personnel and training requirements as related to UNIX hardware maintenance. Refer to paragraph 4c.

(f) Spares Kits. Determine the applicability and supply accountability of spares kits to support program readiness requirements. Refer to paragraph 4d.

(g) Issue of Equipment. Provide instructions to the gaining commands regarding the reporting of issue of the UNIX hardware. Refer to paragraph 5a(2).

(h) Logistics Support Enhancements. Provide information and implementing instructions for any logistics support enhancements (e.g., service upgrade) made at the time of hardware purchase. See Part II of Appendix B hereto.

(i). Failed Classified HDDs. Provide guidance to using units regarding repair of replacement support for failed HDDs with classified data. Refer to paragraph 4a(1).

(j). Facilities Impact. Address facilities impact, as appropriate, in program ULSS. Refer to paragraph 4h.

d. Designated Software Support Activity. N/A.

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Appendix A: List of Allowances and Delivery Schedules

PM NMCI/IT does not field UNIX hardware. PM NMCI/IT functions as the purchasing agent for UNIX hardware required by other MARCORSYSCOM PM offices. Those PM offices are responsible for furnishing a planned distribution of assets to PM NMCI/IT. The distribution plan will be used to create unit allowances in the Logistics Management Information System (LMIS). For those programs with a system TAMCN, the MCHS TAMCN will have an alpha-suffix with a distribution that mirrors the system TAMCN distribution. Current information about relevant TAMCN allowances may be found at the following Web address:

http://www.mccdc.usmc.mil/tfsd/tfsd.html

Appendix B: Vendor Support Requirements Quoted from the Contract

MARINE CORPS COMMON HARDWARE SUITE (MCHS)

UNIX SERVERS AND WORKSTATIONS

PART I
STANDARD ITEMS

The cost to provide the following services and data shall be included in the price for each contract line item number (CLIN) hardware configuration.

*******Except where specified, use of term "UNIX Manufacturer" implies both Hewlett Packard and Sun Microsystems.

1.0 Warranty Provisions. The vendor shall provide a product warranty and warranty support services for servers and desktop computers that are responsive to the following requirements:

1.1 Warranty Length. The vendor shall provide a three-year warranty on all system components. (Options to extend the warranty length are contained in Part II hereto.)

Litton/PRC Response:

Litton/PRC will provide a minimum of three-year warranty on all system components. These warranty offerings will reflect the standard commercial warranty and support offerings available from each UNIX Manufacturer at time of Request for Quote.

The Period of Performance for the Supermini Contract ends September 30, 2003. At that time, it may become necessary for Litton/PRC to migrate all remaining warranty work to one of their other government contract vehicles. In addition, all Services provided as part of these terms and conditions (i.e., Warranty Help Desk, Hotline, Web Site URL) will not change or will be transferred accordingly. This will be done at NO COST TO THE GOVERNMENT. This no cost migration is offered on all SMP Attachment #29 Marine Corps delivery orders in which the three-year warranty period ends after September 30, 2003.

1.2 Warranty End Date. The warranty shall end no sooner than the last calendar day of the month in which the hardware is shipped from the original equipment manufacturer plus the warranty period.

Litton/PRC Response:

The warranty offered by Litton/PRC will end no sooner than the last calendar day of the month in which hardware is shipped from the UNIX Manufacturer, plus the purchased warranty period.

1.3 Warranty Service and Response Time. Warranty service for the hardware purchased shall be limited to furnishing replacement parts only. The Government will provide labor to perform the warranty repairs. Replacement parts shall be provided as part of the warranty service (i.e., at no additional cost to the Government). Replacement parts will be limited to field replaceable units from within the central processing unit (CPU) and monitor. All other items (i.e., keyboard, mouse, external peripherals, and accessories) shall be subject to advance exchange via the warranty claim process. The vendor shall advance ship (via the most expeditious means of transportation available) replacement parts within 24 hours of receipt of a warranty claim (weekends and national holidays excluded). Parts shall be shipped to US Embassies and Bases only. The Government technician will provide a commercial shipping address (to include a building number and street) at the time of making a warranty claim. Parts shall not be shipped to APO/FPO addresses. A pre-paid, pre-addressed shipping carton shall accompany the replacement part. Due to unit deployments and remote area operations, the Government requires up to 45 days return criteria for defective parts. (Options to upgrade service and response time are contained in Part II hereto.)

Litton/PRC Response: Agree.

2.0 Warranty Help Desk, Hotline, and Web Site. The vendor shall provide help desk services and a Marine Corps-unique toll free telephone hotline to facilitate the administration of warranty claims. These services shall be available 24 hours per day, year around. Web based access to this service is also required. The help desk must: 1) provide answers to general hardware issues, 2) validate results of, or (if requested) assist in, the caller's troubleshooting efforts, and 3) document the warranty claim sufficiently to provide the call log report required in paragraph 3.0.

A Marine Corps-unique Web site to access product support information and frequently asked questions shall be provided. Help desk support services for network operations is not required.

Litton/PRC Response: Agree.

3.0 Warranty Help Desk Call Log Report. The vendor shall log all warranty calls, track all problems until resolution, and reply to the originator. The vendor shall provide problem call logs, to include summary actions, via e-mail to the addressee in paragraph 10.1 on a monthly basis. The report shall be provided as an attachment to the e-mail in a Microsoft Excel spreadsheet, or CSV format. The first report is due no later than 60 days after the first delivery order is issued. All warranty calls for the period, whether closed or not, shall be reflected on the monthly report. Monthly reports are due to the Government within 10 calendar days following the month covered in the report. Negative reports are required. At a minimum, the following information shall be included in the report:

Column A: Caller Name
Column B: Caller Location
Column C: Date of Call (MM/DD/YYYY (or YY) format)
Column D: Date of Resolution (MM/DD/YYYY(or YY) format)
Column E: Type of System (List by CLIN or model name of system)
Column F: System Serial Number
Column G: Brief Description of the Problem

Column H: Resolution

Litton/PRC Response:

Litton/PRC will maintain, as designated above, the Warranty Help Desk Call Log Summary. This report will be provided to the Marine Corps in CSV format.

4.0 Warranty Administration Point of Contact. The vendor shall provide the name, telephone number, and Web address for the individual(s) authorized to provide authoritative responses to warranty administration issues. This information shall be provided to the addressee in paragraph 10.1 below. This point of contact must be at a higher level of management in the vendor's organization than the help desk.

Litton/PRC Response:

Litton/PRC shall provide name, telephone number and Web address for individual(s) authorized to provide authoritative responses to warranty administration issues. These POCs are:

Paul Buscemi
703-620-8449
buscemi_paul@prc.com

Susan Volpi
703-620-8152
volpi_susan@prc.com

Tricia Thorsen
757-631-4806
thorsen_tricia@prc.com

5.0 Warranty Label. The vendor shall provide plastic or plastic like label, sufficiently sturdy to last through the expected system life, containing information specified below. Each desktop system shall have labels affixed to external locations on the CPU and on the monitor. Each server shall have a label affixed to an external location on the CPU and to the monitor (when so included). The label on the monitor shall reflect the system serial number (vice the monitor serial number). The label shall be visible in the unit's normal operating position. An exception to the label location requirement is allowed for rack-mounted hardware. The following information, in the order specified, must be reflected on each label:

THIS HARDWARE HAS A PARTS-ONLY WARRANTY†
Warranty Hotline Telephone Number:
Web address for Product Support Information:
Delivery Order Number:
Warranty End Date: (MM/YYYY (or YY) format)
Reseller/Distributor Name:
OEM System Serial Number/CAGE Code:

NOTE: If a "Warranty Enhancement" option from Part II is exercised, this phrase shall be changed to "THIS HARDWARE HAS A PARTS AND LABOR WARRANTY."

TAMCN: (Government provided via Delivery Order, alphanumeric 5 characters)
NSN: (Government provided via Delivery Order, numeric 16 characters)

Litton/PRC Response: Agree.

6.0 Warranty Registration. The vendor shall register items into their warranty database prior to shipment to the customer. That is, submission of a warranty registration card shall not be required to obtain warranty service.

Litton/PRC Response: Agree.

7.0 On-Board Diagnostics Software. The vendor shall provide a comprehensive level 2 (L2) diagnostics software package on each system delivered under this contract. (For information, the power-on-self-test feature is considered a level 1 diagnostic aid.) The Government will use L2 diagnostics to streamline end-user support and service while decreasing the likelihood of product returns and time spent handling technical support issues. The objective of this requirement is to enable end-user support personnel to quickly identify and resolve problems caused by hardware failures and software conflicts. The diagnostics software shall 1) feature non-interactive (automated) and interactive (requiring user input) tests, 2) be capable of running in the background of normal system operations, and 3) seamlessly share data with other applications and tools. The Government has no plans to integrate other diagnostics test tools into the vendor furnished diagnostics software. Although not desirable, if proprietary diagnostic software is the only available tool, the vendor shall provide the user name and password access to the addressee in paragraph 10.1 following.

Litton/PRC Response: Agree.

8.0 Restore Compact Disk. The vendor shall provide a compact disk containing all operating system and commercial software loaded on the original hard disk drive. This requirement does not apply to server operating systems. This compact disk simplifies re-installation of the original software image in the event of disk corruption or hard drive failure.

(NOTE: This disk is usually provided by the OEM to every commercial customer and is packed in one of the system component boxes. Only one compact disk is required per computer system.)

Litton/PRC Response: Agree.

9.0 Documentation. The vendor shall provide a user's manual for each item ordered (hardware and software).

(NOTE: This manual is usually provided by the OEM to every commercial customer and is packed in one of the system component boxes. Only one user manual per item is required.)

Litton/PRC Response: Agree.

10.0 Asset Information Report. The vendor shall provide the data specified below in a Microsoft Excel spreadsheet, or CSV file format, via e-mail, within five business days of completion of

shipping **all** assets for a particular Delivery Order. (Do not send a report on partial shipment of assets.) A separate spreadsheet is required for each Delivery Order issued. (Do not combine Delivery Order reports.) The e-mail shall be provided to the addressee in paragraph 10.1 following. Using a specialized software program, the Government will extract the data from the e-mail to populate an asset management database. The spreadsheet shall contain one row for the table headings and a row of data for each computer system shipped (the computer system includes the monitor, when ordered).

The following data is required on each computer system shipped:

Column A: Serial Number-CAGE Code (System serial number ONLY) (maximum of 30 characters, left adjusted)
Column B: CLIN (CLIN number combined with model name as listed on the Marine Corps Buyers Guide)
Column C: Delivery Order Number (Government's: left adjusted)
Column D: Ship Date (MM/DD/YYYY (or YY) format: right adjusted, enter without spaces)
Column E: Warranty End Date (MM/YYYY format: right adjusted, enter without spaces)
Column F: Ship to Address (maximum of 255 characters: left adjusted)
Column G: TAMCN (Government provided via the Delivery Order: left adjusted)
Column H: NSN (Government provided via the Delivery Order: left adjusted)
Column I: Target Site (name of USMC installation to which the asset was shipped, i.e., Camp Lejeune NC, Cherry Point NC, Parris Island SC, Beaufort SC, Albany GA, Blount Island FL, Quantico VA, Barstow CA, Camp Pendleton CA, MCAS Miramar San Diego CA, MCRD San Diego CA, Hawaii, Okinawa JA, and Iwakuni JA; if other than one of the preceding, insert "other": maximum of 35 characters, left adjusted)
Column J: Configuration (Description of parts that make up the system, including the monitor. Use part descriptions (from the part #s purchased). Identify warranty or warranty enhancement purchased. Separate (delimit) data elements with the VERTICAL BAR symbol "|" (uppercase backslash), NO COMMAS: Limit to 32,000 characters, left adjusted)

To avoid errors when imported into the Government's database, ensure the following requirements are met:

- All alpha characters shall be in upper case.
- Each spreadsheet shall contain one row with the column headings as provided above.
- All data for each system serial number shall be included in only one row.
- All applicable fields shall be completed for each system serial number (i.e., do not use ditto).
- Do not use formulas to populate fields.
- Do not use hard returns in any data field.
- Do not use text wrap in any data field.
- Do not use commas in any data field.

Litton/PRC Response: Agree.

10.1 E-Mail Address. Data deliverables shall be sent to the following addressee:

E-mail: TrackingMA@mcsc.usmc.mil

If an e-mail delivery problem arises, call the asset manager at (703) 784-0770.

Litton/PRC Response: Agree.

PART II
ENHANCEMENTS: PRICED SEPARATELY

1.0 Warranty Enhancements. Please note, if any warranty enhancements are selected, the warranty label required in paragraph 5.0 of Part I must be changed accordingly.

1.1 Warranty Period Extensions. The vendor shall offer options to extend the initial warranty period for year four (4) and year five (5). The Government will make the warranty length determination at the time of system purchase. The level of service (e.g., response time) shall be the same as provided in the initial period unless upgraded.

Litton/PRC Response: Agree.

1.2 CONUS Warranty Service Upgrade. The vendor shall offer the following upgrades, applicable to CONUS only:

1.2.1 On-Call Labor: Hardware four-hour response time Monday through Friday, 8 AM to 5 PM, local time, exclusive of weekends and national holidays.

Litton/PRC Response:

Litton/PRC will offer on-call labor hardware four-hour response time Monday through Friday, 8 AM to 5 PM, local time, exclusive of weekends and national holidays, as per Ts and Cs of commercial offerings of UNIX Manufacturers at time of Request for Quote.

1.2.2 On-Call Labor: Hardware four-hour response time 24x7, no exclusions.

Litton/PRC Response:

Litton/PRC will offer four-hour response time 24X7, no exclusions, as per Ts and Cs of commercial offerings of UNIX Manufacturers at time of Request for Quote.

2.0 Spares Package. The vendor shall offer priced options to lease a spares package for one, two, or three years. Government computer technicians perform repair aided by a leased spares package. This repair action is performed in concert with a hotline call or web access to the vendor's help desk. The help desk operator is responsible for confirming the diagnosis and initiating action to advance ship (via the most expeditious means of transportation) a replacement part within 24 hours. When necessary, the vendor's help desk shall act as a source of remote technical support for problem resolution. Replacement parts shall be provided at no additional expense to the Government. The Government will return ship the defective part to the vendor in a pre-paid container furnished with the replacement part.

Spares kits shall be configured to provide a 60-day sustainment support period for one system at a projected 95 percent or better availability.

Spares kit components shall be packaged in a rugged container suitable for field operations and appropriate for transport via air, rail, or ship. The rugged container shall be labeled to indicate:

- The contents are under a lease agreement.
- The lessor's name, warranty support hotline number, and Web site.
- The lease period. (A label must be provided if a lease is renewed.)

Litton/PRC Response:

On an as needed basis, Litton/PRC shall make available to the Marine Corps, options to lease a spare parts package for each of the configurations offered. A suggested parts stocking list for each system type sold via this contract will be made available, after joint consultation with UNIX Manufacturer, Marine Corps and Litton/PRC. This list is not meant to ensure 100% parts availability. There will be no requirement to lease every recommended spare part identified. Depending upon lease term desired, this lease may be priced via either the Litton/PRC Supermini Contract or the Litton/PRC GSA Schedule.

Option for lease of labeled rugged transport container for spare parts will also be provided.

Lease quotes will be priced at time of Marine Corps Request for Quote, as lease rates are effected by term of lease desired, location of equipment and dynamic financial market conditions, such as Treasury Bills rates.

3.0 Self-Maintenance Support Services and Products. The vendor shall provide a hardware-training program that qualifies Government computer technicians to perform repairs without voiding the warranty. On-line, self-paced based training is preferred. For certified technicians, the vendor shall provide access to service delivery products, including relevant diagnostics licenses, commercially available hard copy documentation and access to customer support centers.

Litton/PRC Response:

Litton/PRC, in cooperation with the UNIX Manufacturers, will provide to the Marine Corps a hardware-training program that qualifies Government technicians to perform repairs without voiding the warranty.

Due to uniquely identified course offerings by Sun Microsystems and Hewlett-Packard, each manufacturer's offerings are handled in a separate section as follows:

The Self-Maintenance Training Program offered by all UNIX Manufacturers requires that one person from each participating site is trained on the products requiring support at that site. To qualify for training, that person must be proficient in UNIX Manufacturers Operating System (HP-UX or Solaris) and have a minimum two-years technician experience.

SECTION 1: HEWLETT-PACKARD

The following details the required courses that are available:

Model #	Description	Deliverable
PA Common*	Precision Architecture Fund	OLTS (1 day)
HP-UX User Basics*	HP-UX 10.X System User Basics	OLTS (2 days)
HP-UX Admin Basics*	HP-UX 10.X Sys Admin Basics	OLTS (5 days)
LVM*	Logical Volume Manager Basics	OLTS (2 days)
Diagnostics	MESA Diagnostics	OLTS (2 days)
B2000**	B2000 Workstation	EPSS
N-4000**	N-Class Server	EPSS
J5600**	J5000/J7000 Servers	EPSS
D390**	D-Class Server	Self-Paced w/manuals
K380.K390**	K-Class Servers	Self-Paced w/Video & manuals

*Pre-requisite for Workstation and Server Training
** Availability subject to product obsolescence

Electronic Performance Support Solutions (EPSS)

- 'EPSS' on a CD-ROM for a Supported Product that is designed for instructional delivery on a computer.
- The EPSS CD-ROM is designed for individual usage both for learning and reference. Group use is not allowed.

Self-Paced Training

Materials include service manuals and student workbook. This material is delivered via a CD-ROM. Videos are included when available. This may also be sold for individual usage or one video per site with permissions to replicate materials from CD-ROM.

On-Line Training System (OLTS)

OLTS offers Just-In-Time (JIT) training when and where the Marine Corps needs it. OLTS is a pool of machines controlled by a reservation system. Students reserve a machine or group of machines to perform the lab exercises for a course, or to refresh their technical skills. In addition to the convenience of JIT, OLTS offers guided hands-on

experience at substantial savings over lecture/labs. The student can dial into the OLTS from their own location and perform the course without needing to travel.

All HP Training Materials are the exclusive property of HP and are copyrighted by HP and protected by United States copyright laws and International Treaty Provisions. All Materials marked as 'HP Confidential' or 'HP Restricted Information' will be considered confidential, HP Restricted Information.

Other benefits from the Self-Maintenance Program that is being offered are as follows:

- Electronic access to HP's IT Resource Center will be made available.
- Software License to Use is available only for the software sold through this program and subsequently covered under an HP software contract.
- Current pricing does not include software support.
- Remote Hardware Troubleshooting assistance is available to the trained technicians only.
- Parts Replenishment of the spares kits can be ordered by the trained technician only. HP will expedite these parts to ensure they will arrive within 2 days for CONUS locations.
- The trained technician can order additional parts required for a specific repair. HP will expedite these parts to ensure they will arrive within 2 days for CONUS locations.
  Return of Defective parts is required within 45 days of the parts order or the end user will be billed HP GSA list replacement pricing for the part. A Return Material Authorization (RMA) number is required for all returned parts. Litton/PRC will be responsible for costs associated with shipping replacement parts to the customer and will include a self-addressed, pre-paid carton for return of defective parts.
- Hardware and diagnostic manuals are provided with the training classes. Updates to these manuals can be purchased from HP.

Marines Responsibilities: The Marines are responsible for:

- ensuring one person is trained at each site
- protecting the confidential nature and copyright requirements of the information provided
- ensuring that repair parts are only used for products under the support of this program
- ensuring all parts are returned in a timely manner to avoid parts billings
- paying for any parts that are not returned or that are returned damaged

General Guidelines:

1) Only products sold through and subsequently covered by this program qualify for repair under this self-maintainer option.
2) Once the end user drops support on a system, that system cannot be added back onto this Self-Maintainer program.

3) Parts are available only for the products sold through and actively covered under this agreement.
4) Only end user technicians who have successfully completed the applicable training will be allowed to service the equipment covered under this program.

Service Authorization:

As a technician, you can participate in HP Self-Maintenance only after you are trained, tested, and authorized by HP. You will need to purchase and complete applicable service training for the eligible products and then pass the service exam. HP will determine the passing grade for the training based on the same standards applied to HP's own Customer Engineers.

Your service-authorization number acknowledges authorization. Service-authorization numbers are issued and updated upon completion of the appropriate service training and testing. Ideally, the Marine Corps will notify Litton/PRC and/or HP of any changes in HP service-authorized personnel. Failure to have an up-to-date list of authorized personnel could delay warranty service.

Service Documentation and Information
You may only use documentation supplied under HP Self-Maintenance for the support of HP products at your installation site. Do not duplicate such documentation to sell or give away to any other party, except as specifically authorized in writing by HP.

Using the HP name
At your installation site you may refer to yourself as an "authorized Hewlett-Packard technician". You may not represent yourself as an "authorized Hewlett-Packard technician" outside your installation site.

SECTION 2: SUN MICROSYSTEMS

At this time, computer-based hardware training is not available from Sun Microsystems. This training will provide relevant diagnostics for qualified students and commercially available hardcopy documentation as well as access to Sun's Customer Support Help Desk (1-800-USA-4SUN).

Training offering: Train the Maintainer Education Boot Camp

The education offering consists of two consecutive five-day classes addressing both the hardware and software requirements necessary for Government personnel to troubleshoot and repair Sun systems in remote field locations. This training will also prepare the students to assist and tutor other staff members in fundamental repair techniques. The initial five days of training consists of the SM-101 class, "Solaris Essentials for System Maintainers". The second five days can be either server or

desktop system-specific based on the customer's requirements. Desktop maintainers are best served by selecting the SM-210 class, "Sun Desktop Systems Maintenance" while server environments would use the SM-240, "Sun Ultra Enterprise Server Maintenance". Classes will be conducted at the Government's location using the Government's equipment for up to sixteen students.

SM-101 Solaris Essentials for System Maintainers

The Solaris Essentials for System Maintainers course introduces the Solaris 7 Operating Environment skills required to successfully maintain Sun hardware. It provides hands-on experience with useful UNIX commands for system hardware maintainers.

Who Can Benefit:

Hardware maintainers who have computer maintenance experience, but no Sun hardware or UNIX operating system experience.

Prerequisites:

- Understand basic computer concepts such as disks, random access memory (RAM), and read-only memory (ROM)
- Use a text editor of any type

Skills Gained:

- Differentiate the general characteristics of each SPARC system and its peripherals
- Install Solaris software on a standalone system
- Execute and use selected elements of the CDE (Common Desktop Environment) environment
- Describe the Solaris file structure and navigate the file system
- Create and remove components of the Solaris file structure
- Describe the boot programmable read only memory (PROM) and its functions
- Trace the boot-up process, the firmware, software and hardware
- Start up and shut down a Sun Workstation in the correct sequence
- Execute the format utility to determine the disk partition offsets and sizes
- Use the vi text editor to create and modify selected UNIX files
- Mount local disks and removable media, and access a file system
- Use basic Solaris networking commands
- Install, configure, and manage the NFSTM server-client environment

SM-210 Sun Desktop Systems Maintenance

In Sun Desktop Systems Maintenance, students learn how to install, configure, diagnose, and verify proper operation of desktop workstations and associated peripherals based on Sun SPARC technology. This course is for field engineers, system administrators, or anyone charged with the upkeep of Sun SPARC desktop systems. Students will troubleshoot malfunctions introduced into desktop workstations by using all available diagnostic tools.

Prerequisites:

- Troubleshoot digital computers to the Field-Replaceable Unit (FRU) level

Skills Gained:

- Perform installation of desktop systems and associated peripherals
- Verify that all desktop voltages are within specified tolerances
- Describe the system power-on sequence with a block diagram
- Describe the system boot sequence with a flowchart
- Correctly state the purpose of selected FORTH tool kit commands
- Select the correct diagnostic tool for a specific problem
- Correctly activate and configure all available diagnostic tools
- Interpret the results of any diagnostic tool output
- Identify, isolate, and describe correct repair for a given system failure, CRU/FRU level
- Describe the functional characteristics of OpenBoot programmable read-only memory (PROM) architecture
- Install Sbus cards
- Simulate an fsck repair, and run disk inquiry commands
- Analyze and format a hard disk drive

SM-240 Sun Ultra Enterprise Server Maintenance

The Sun Ultra Enterprise Server Maintenance course provides students with the information necessary to install, configure, and maintain the Sun Workgroup Servers 250 and 450 as well as the Ultra Enterprise Servers 3500, 4500, 5500, and 6500 systems. Learn about the hardware components and the architecture of the Workgroup and Ultra Enterprise Server lines. Gain practical experience troubleshooting failed system components. The student can also learn how to use a variety of diagnostic utilities, including prtdiag, Solstice System Monitor (Symon), and SunVTS utilities.

Who Can Benefit:

- Field Service engineers
- Sun Enterprise system self-maintainers
- Experienced servicing medium to large scale networked database servers

Prerequisites:

Assemble systems, troubleshoot large-scale server systems and replace field replaceable components.

Skills Gained:

- Analyze system boot failure and identify the failure area
- Disassemble and identify FRU components of each system type
- Reassemble and replace FRU components in each system type
- Use selected Open Boot PROM commands and correctly interpret the results
- Monitor and change system operating status

- Correctly identify system operations using SyMon
- Properly demonstrate the correct procedure when replacing a hot pluggable FRU
- Select, configure, and activate the appropriate diagnostic tool for any specific problem
- Setup and configure system components and options
- Describe the dynamic reconfiguration operation
- Interpret the results of selected diagnostic and validation test results
- Troubleshoot system malfunctions utilizing SunVTS and other diagnostic tools provided
- Locate and repair system failures to the FRU level
- Utilize Sun documentation to correctly identify, configure, remove/replace, and order system FRUs
- Demonstrate and correct usage of Electro Static Discharge (ESD) precautions when disassembling systems

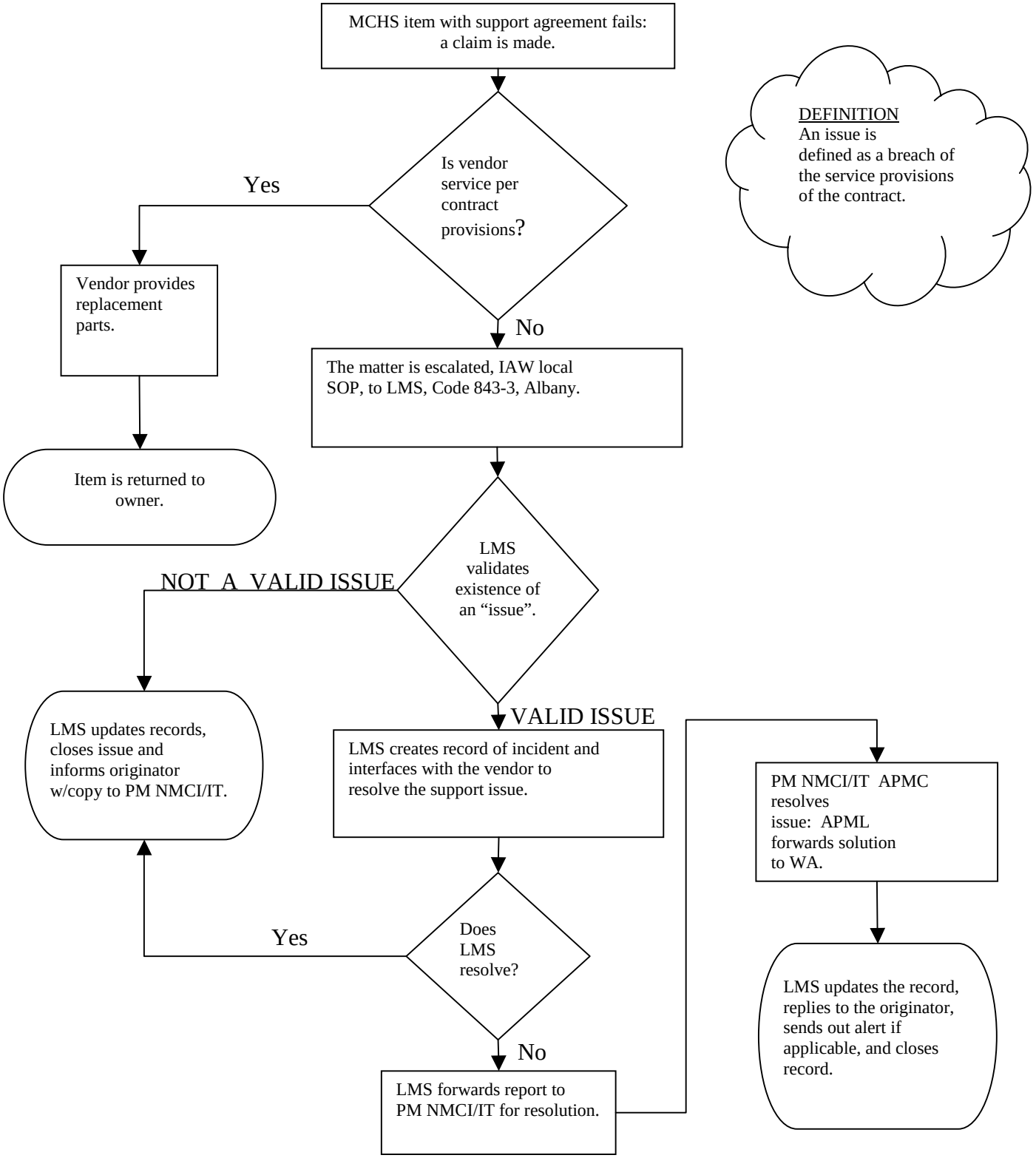
4.0 Media Retention. The vendor shall offer an enhancement that provides a replacement hard disk drive without a requirement to return a defective hard disk drive.

Litton/PRC Response:

Each UNIX Manufacturer has a program for handling drive situations, described above, and Litton/PRC shall offer to Marine Corps these enhancements. These programs may involve an additional warranty or purchase cost.

Appendix C

COMMERCIAL SUPPLY SUPPORT AGREEMENT ISSUE ESCALATION AND RESOLUTION PROCESS FOR MCHS EQUIPMENT



Appendix D

COMMERCIAL SUPPLY SUPPORT DISAGREEMENT ESCALATION AND RESOLUTION PROCESS FOR MCHS